

INDEX

Name of Work : Structural repair of exterior damaged components and water proofing solution to 3 m wide RCC slabs in Main Office building of Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida-201301

Sr. No.	DESCRIPTION	Page No.
1	Index	1
2	Chapter-1	
2.1	Notice Inviting Tender	2-3
2.2	Information And Instructions For Bidder	4-10
2.3	List of Documents to be Scanned and Uploaded at the Time of Technical Bid Submission	11
2.4	Format For Power of Attorney for Signing of BID	12
3	Chapter-2	
3.1	Format For Technical Bid Submission Letter	13-14
3.2	Sample Letter of Acceptance of Tender	15
4	Chapter-3	
4.1	Proforma of Schedules	16-22
5	Chapter-4	
5.1	General Conditions	23-34
5.2	Integrity Agreement	35-41
5.3	Form of Earnest Money (Bank Guarantee)	42-43
5.4	Form of Performance Security Bank Guarantee Bond	44-45
5.5	Performance Guarantee	46
5.6	Guarantee to be Executed By the Contractor for Removal of Defects after Completion in Respect of Water Proofing Works	47
5.7	Form of Bank Guarantee Bond for Security Deposit for the Work of Water-Proofing Works	48-49
6	Chapter-5	
6.1	Minimum Quality Assurance Plan (Civil Work)	50
7	Chapter-6	
7.1	Special Conditions	51-55
8	Chapter-7	
8.1	Additional Conditions for Cement & Steel	56-58
9	Chapter-8	
9.1	Particular Specifications	59-61
10	Chapter-9	
10.1	Commercial Conditions	62-65
11	Chapter-10	
11.1	Other Work Requirement and Compliance to Laws	66-70
11.2	Schedule of Quantities	71-77

PART- A

GOVERNMENT OF INDIA
INDIAN ACADEMY OF HIGHWAY ENGINEERS (IAHE), A-5, SECTOR-62 NOIDA-201301

CHAPTER-1
NOTICE INVITING TENDER

The Deputy Director, IAHE invites on behalf of the President of India, an Item rate tender from authorised applicator of the chemical/product mentioned in the schedule of quantities by e-tendering process for the work of "*Structural repair of exterior damaged components and water proofing solution to 3 m wide RCC slabs in Main Office building of Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida-201301*"

Schedule of bidding process is as follows:

NIT No.	F.237/2010-11/IAHE
Estimated cost of the work/cost put to tender (in Rs.)	68,80,425/-
Earnest Money Deposit (EMD)	2.0% of the tendered value (Rs. 1,37,608/-)
Performance Guarantee	5.0% of the tendered value
Time Allowed for work	4 Months
Date of uploading the e-tender on CPP portal	22.03.2019
Date of pre bid conference in the chamber of Director, IAHE, A-5 Sector-62, Noida	01.04.2019 (11.00 AM)
Last date and time of submission of technical and financial bids online	3.00 PM on 08.04.2019
Last date of submission of technical bids (only) in hard copy	1.00 PM on 09.04.2019
Date of opening of technical bids	3.00 PM on 09.04.2019

The complete BID document can be viewed / downloaded from official portal of the CPP website <https://eprocure.gov.in/eprocure/app> from 22.03.2019 to 08.04.2019 (upto 15.00 Hrs. IST).

Bid through any other mode shall not be entertained. However, EMD, Power of Attorney in original, shall be submitted physically by the Bidder on or before 09.04.2019 (at 13.00 hours IST). Please note that the IAHE reserves the right to accept or reject all or any of the BIDs without assigning any reason whatsoever.

(Devender Kumar)
Deputy Director, IAHE, Noida

INFORMATION AND INSTRUCTIONS TO BIDDER FOR e-TENDERING FORMING PART OF TENDER DOCUMENT AND TO BE POSTED ON WEBSITE

1.1 The Deputy Director, IAHE, A-5, Sector-62 Noida-201301 (Ph. No.- 0120-2405009, e-mail- devender.kumar91@gov.in) invites on behalf of President of India online item rate tender from authorized applicator of the chemical/product to be used for the work of "Structural repair of exterior damaged components and water proofing solution to 3 m wide RCC slabs in Main Office building of Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida-201301"

1.2 It must be noted that being the specialised work of protection of reinforcement of RCC structure, application of appropriate chemicals with requisite specification on concrete, reinforcement, and water proofing system, **only authorised applicators** of the products specified in the schedule of quantities would be eligible for bid. Authorisation letter must be presented along with technical bid failing of which the bidder would be disqualified and not be eligible for evaluation of technical bids.

1.3 The Contractor shall also be responsible for the rectifying any defects during the Defect Liability Period which shall be 1 year from the date of completion of the work. The defects in the executed work shall be rectified within a week period after reporting by the Authority (i.e IAHE), failing of which the authority is free to rectify the defects at the cost of the contractor.

2 Qualifications requirements of Bidders:

2.1 **Similar Work:** For demonstrating the experience of similar works execution, the Bidder shall, over the past 7 (Seven) financial years preceding the Bid Due Date, have received payments, or has undertaken the works by itself, such that value of works, as further adjusted in accordance with updating factor is more than the values as specified in table below. It may be noted by the bidders that experience of similar work for **BOTH types of works** i.e. water proofing system as mentioned at sr. no. 1 below and Repair and rehabilitation of exposed reinforcement in RCC structure as mentioned at sr. no. 2 below has to be demonstrated separately.

TABLE-1 : Qualifying conditions for Similar work			
Sl. No.	Name of the Specialized Work/Individual Component	Similar Work Definition	Experience of the authorized applicator
1.	Water proofing system	Works involving terrace water proofing system in Non-Residential Building.	Experience of having successfully completed similar works over the past 7 (Seven) financial years preceding the Bid Due Date. Three similar works each of value not less than Rs. 5 lakh OR Two similar works each of value not less than Rs. 7 lakh OR

			One similar works each of value not less than Rs. 10 lakh
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AND

2.	Repair and rehabilitation of exposed reinforcement in RCC structure	Works involving repair and rehabilitation of exposed reinforcement work in RCC structure	<p>Experience of having successfully completed similar works during last seven years preceding the Bid Due Date.</p> <p>Three similar works each of value not less than Rs. 23 lakh</p> <p>OR</p> <p>Two similar works each of value not less than Rs. 35.00 lakh</p> <p>OR</p> <p>One similar works each of value not less than Rs. 46.00 lakh</p>
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Note: -

1. All amounts rounded off to a convenient figure. The value of executed works shall be brought to current costing level by enhancing the actual value of work as per following updating factor:

Year	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7
Updating Factor	1.0	1.05	1.10	1.15	1.20	1.25	1.30

2. In case of Govt./Semi Govt. works, the completion certificate issued by Executive Engineer or above level officer would be Mandatory. In addition to above, certificate from statutory auditor for the payment received for afore said similar work would also be furnished.
3. For works executed for private firms, the completion certificate from the representative of the firms and certificate from statutory auditor for the payment received for afore said similar work would also be furnished.
4. For this purpose, a work shall be considered to be completed, if more than 90% of the value of work has been completed.

2.2 Financial Capacity: The Bidder shall have a minimum Average Annual Turnover (updated to the price level of the year based on factors indicated above) of Rs. **68,80,425/- (Sixty Eight lakh Eighty thousand four hundred and twenty five)** for the last 5 (five) financial years. The Bidder shall provide an Auditor's Certificate specifying the annual turnover.

Name of Bidder	Annual Turnover									
	Year-1		Year-2		Year-3		Year-4		Year-5	
	Rs.	Updation factor	Rs.	Updation factor	Rs.	Updation factor	Rs.	Updation factor	Rs.	Updation factor
1	2	3	4	5	6	7	8	9	10	11
		1.00		1.05		1.10		1.15		1.20

3. The Bidder should submit a Power of Attorney as per the format at Annexure-II, authorizing the signatory of the BID to commit the Bidder.
4. The intending bidder must read the terms and conditions carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
5. Information and instructions for bidder posted on website shall form part of tender document.
6. The bid documents consisting specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website <http://eprocure.gov.in> free of cost.
7. Those contractors not registered on the website mentioned above are required to get registered beforehand. If needed they can be imparted training on online tendering process as per details available on the website.
8. The intending bidder must have valid class-III digital signature to submit the tender.
9. On opening date, the contractor can login and see the tender opening process. After opening of tenders he will receive the competitor tender sheets.
10. Contractor must ensure to quote rate of each item. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO). However, if a tendered quotes nil rates against each item in item rate tender, the tender shall be treated as invalid.
11. Integrity pact of the tender document shall be signed between Deputy Director, IAHE and the successful bidder after acceptance of the tender.

12. If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder the tender shall become invalid.
13. It is mandatory to upload scanned copies of all the documents including GST Registration and applicable undertaking if any given below. **If these documents are not uploaded the bid will become invalid and shall be summarily be rejected.**
14. **Brief Description of bidding process:** The Authority has adopted a single stage two part system (referred to as the "**Bidding Process**") for selection of the Bidder for award of the Project. Under this process, the bid shall be invited under two parts. Eligibility and qualification of the Bidder will be first examined based on the details submitted under first part (Technical Bid) with respect to eligibility and qualifications criteria prescribed in this RFP/NIT. The Financial Bid under the second part shall be opened of only those Bidders whose Technical Bids are responsive to eligibility and qualifications requirements as per this RFP.
15. The bid for the works shall remain open for acceptance for a period of 45 days from the date of opening of Eligibility/Technical bid. If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
16. BIDs will be evaluated for the Project on the basis of the lowest cost required by a Bidder for implementing the Project (the "**BID Price**"). Generally, the Lowest Bidder shall be the selected Bidder. In case such Lowest Bidder withdraws or is not selected for whatsoever reason, the Authority shall annul the Bidding Process and invite fresh BIDs.
17. The authorization of the contractor/applicator should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the authorization of contractor should be valid on the original date of submission of bids.
18. The work is estimated to cost Rs. 68,80,425/- This estimate, however, is given merely as a rough guide and quantities of the items may vary with respect to the quantities given in the NIT depending upon the actual condition of the structure and actual measurement of the work to be executed. The payment of the items shall be done based on the actual work executed and not on the basis of the estimated item quantities in the NIT.
19. Agreement shall be drawn with the successful bidders on prescribed Form which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
20. The time allowed for carrying out the work will be **04 Months** from the date of start as defined in **Schedule 'F'**.

21. The bid document consisting of specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from website <http://eprocure.gov.in> free of cost. CPWD Standard General Conditions updated till January 2019 will also form the part of the contract.
22. The technical bid submitted shall become invalid if:
- (i) The bidder is not qualified in accordance with the qualifying conditions mentioned above.
 - (ii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted **physically by the lowest bidder** in the office of tender opening authority.
 - (iii) If a bidder quotes nil rates against each item in item rate tender, the bid shall be treated as invalid.
 - (iv) If the bidder does not upload the requisite documents for qualifying conditions.
23. The contractor, whose bid is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of bank guarantee (BG) in accordance with the prescribed form from any scheduled Bank operable at Noida/Delhi. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. **The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare board and ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work and programme Chart (Time and progress) within the period specified in Schedule F.**
24. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract

documents. Submission of a bid by a bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

25. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason at any time of tendering process. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
26. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received or annul the bidding process without the assignment of any reason at any time of tendering process.
27. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.
28. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
29. No Engineer of gazette rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
30. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of LoA (letter of award), sign the contract consisting of:-
 - a) The Notice Inviting Bid, all the documents including additional conditions, specifications, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - b) General Condition of Contract updated till January 2019
31. The eligible bidders shall quote rates for all items of work.
32. After acceptance of the bid by competent authority, the Deputy Director in charge the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with Deputy

Director in charge of work. It will be obligatory on the part of bidder to sign the contract within the 15 days of issue of Letter of award or the date indicated by the authority (i.e. Deputy Director, IAHE) whichever is later.

33. In case of reduction in scope of work no claim on account of reduction in value of work, loss of expected profit, consequential overheads etc. shall be entertained.
34. The bidder shall quote the rates against each item including Goods & Service Tax or any other tax applicable in respect of the item. Nothing this contract shall be payable separately to the Contractor.
35. Anything not mentioned in the contract agreement specifically, shall be governed by CPWD Works manual 2014 and General conditions of the contract updated till 03.01.2019.

ANNEXURE-I

**LIST OF DOCUMENTS TO BE SCANNED AND UPLOADED AT THE TIME OF
TECHNICAL BID SUBMISSION**

(i)	Scanned copy of Demand Draft/Bank Gurantee against EMD. The EMD is to be drawn in favour of Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
(ii)	Completion certificate issued by Executive Engineer or above level officer/representative of Private Firm in case of firm and certificate from statutory auditor for the payment received for said similar works would also be furnished
(iii)	Copy of Authorization letter of the concerned chemical company for application of the products/chemical specified in schedule of quantities.
(iv)	Certificate of Registration of GST and acknowledgement of up-to-date filed return.
(v)	Copy of bidder's Pan Card
(vi)	Scanned copy of Power of Attorney

Format for Power of Attorney for signing of BID

Know all men by these presents, We..... (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms (name), son/daughter/wife of and presently residing at, who is presently employed with us and holding the position of, as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our BID for the Project proposed by the Indian Academy of Highway Engineers (the "Authority") including but not limited to signing and submission of all applications, BIDs and other documents and writings, participate in Pre-BID and other conferences and providing information/ responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the agreement and undertakings consequent to acceptance of our BID, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our BID for the said Project and/ or upon award thereof to us and/or until the entering into Contract with the Authority.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE,, THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF 2....

For
(Signature, name, designation and address)
of person authorized by Board Resolution
(in case of Firm/ Company)/ partner in case of
Partnership firm

Witnesses:

- 1.
- 2.

Accepted

.....

(Signature)

(Name, Title and Address of the Attorney)

(Notarised)
Person identified by me/ personally appeared before me/
Attested/ Authenticated*

(*Notary to specify as applicable)

(Signature Name and Address of the Notary)

Seal of the Notary

Registration No. of the Notary

Date:.....

CHAPTER-2

GOVERNMENT OF INDIA
INDIAN ACADEMY OF HIGHWAY ENGINEERS (IAHE), A-5, SECTOR-62 NOIDA
(Ministry of Road Transport & Highways)

Item Rate Tender & Contract for Works

Tender for the work of *"Structural repair of exterior damaged components and water proofing solution to 3 m wide RCC slabs in Main Office building of Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida-201301"*

- (i) To be submitted online by 3:00 PM (time) on 08.04.2019.
- (ii) To be opened online in presence of bidders who may be present at 3.00 PM on 09.04.2019 in the office of Director, IAHE, A-5, Sector-62, Noida-201301.

FORMAT FOR TECHNICAL BID SUBMISSION LETTER

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F, Specification applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for thirty (45) days from the date of opening of eligibility / technical bid and not to make any modification in its terms and conditions.

A sum of Rs. 1,37,608/- is hereby forwarded in form of demand draft /bank guarantee issued by a scheduled bank as earnest money.

A copy of demand draft /bank guarantee issued by a scheduled bank as earnest money is scanned and uploaded (~~strike out as the case may be~~). If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the

terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information /derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated**

Signature of the Contractor

Postal Address-----**

Telephone No-----**

Witness -----**

Address-----**

Occupation -----**

FAX -----**

E-MAIL -----**

Sample letter of acceptance of tender

A C C E P T A N C E

[Reference para 20.4.9(1)]

No.....

Dated,

The.....

From

The Deputy Director,
IAHE.

To

(Name and address of the contractor)

Subject.....

(Name of the work as appearing in the tender for the work)

Dear Sir (s),

Your tender for the work mentioned above has been accepted on behalf of the President of India at your tendered/negotiated tender amount of Rs..... (Rupees..... Only), which is% below / above the estimated cost of Rs.....(Rupees.....only).

2. You are requested to submit the performance security/guarantee of Rs..... (Rupees.....only) within.....days* of issue of this letter. The performance guarantee shall be in the prescribed form as provided in clause 1 of the General Conditions of Contract for CPWD works, and shall be valid up to.....

3. On receipt of the prescribed performance guarantee, necessary letter to commence the work shall be issued, and the site of work handed over to you thereafter.

4. Please note that the time allowed for carrying out the work as entered in the tender (..... days/weeks/months) shall be reckoned from the.....day* after the date of issue of this letter.

Yours faithfully,

Deputy Director
For and on behalf of President of India
..... Division, CPWD,.....

CHAPTER-3

PROFORMA OF SCHEDULES

SCHEDULE 'A'

Schedule of quantities : As per enclosed Schedule of Quantities

SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

S.No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	2	3	4	5
---- Nil ----				

SCHEDULE 'C'

Tools and plants to be hired to the contractor

S. No	Description	Hire charges per day	Place of Issue
1	2	3	4
---- Nil ----			

SCHEDULE 'D' Extra schedule for specific requirements/ document for the work, if any.	<ol style="list-style-type: none">1. General conditions2. Special Conditions3. Particular Specifications4. Guarantee Bonds
SCHEDULE 'E' Reference to General Conditions of contract.	GCC for Central PWD Works updated till January 2019, CPWD work manual 2014 incorporating amendment upto last date of submission of tender.
Name of Work	Structural repair of exterior damaged components and water proofing solution to 3 m wide RCC slabs in Main Office building of Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida-201301.
Estimated cost of work	Rs. 68,80,425/-
Earnest money	Rs. 1,37,608/-, (to be returned after receiving performance guarantee)
Performance guarantee	5% of tendered value
EMD deposit	2.0% of tendered value
SCHEDULE 'F'	
GENERAL RULES & DIRECTIONS: Officer inviting tender	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
Maximum percentage for quantity of items of work to be executed beyond which rates are to be	See under Clause 12.

determined in accordance with Clauses 12.2 & 12.3:	
Definitions:	
(i) Engineer-in-Charge	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
(ii) Accepting Authority	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
(iii) Percentage on cost of materials and labour to cover all overheads and profits:	15%
(iv) Standard Schedule of Rates	DSR 2016 with upto date correction slip and market rates/ market rates for non-scheduled items
(v) Department	Indian Academy of Highway Engineers.
(ii) Standard CPWD Contract Form	General Conditions of Contract for Central PWD Works 2014 incorporating amendments upto last date of submission of tender.
Clause 1	
(i) Time allowed for submission of performance guarantee, programme chart (time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	7 days
(ii) Maximum allowable extension with late fee at 0.1% per day of performance guarantee amount beyond the period provided in (i) above	7 days
Clause 2	
Authority for fixing compensation under clause 2	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
Clause 2A	
Whether Clause 2A shall be applicable	No
Clause 5	
Number of days from the date of issue of letter of acceptance for reckoning date of start	15 days or the date indicated by Authority whichever is later

Table of Mile stone(s)

Sr. No.	Sub work Description	Financial Progress	Time in days allowed (Days)	Amount to be withheld in case of non achievement of milestone.
---------	----------------------	--------------------	-----------------------------	----------------------------------------------------------------

1	Dismantling work	As per actual value of works executed	27	In the event of not achieving the necessary progress as assessed from the running payments, 1.25% of the tendered value of work will be withheld for failure of each milestone
2	Structural steel/bar repairing work	As per actual value of works executed	29	
3	Plaster Cracks Repair work	As per actual value of works executed	4	
4	Waterproofing System on Horizontal Slabs Projecting outward	As per actual value of works executed (10% of this payment to be withheld as security for water proofing system)	20	
5	Damaged Plaster Chipping Off and Replastering	As per actual value of works executed	26	
6	Time for Brick work	As per actual value of works executed	13	
7	Miscellaneous	As per actual value of works executed	1	
	Total		120	

Note : The withhold milestone will only be released when subsequent milestone is achieved within the specified time.

Time allowed for execution of work	06 Months
Authority to decide:	
(i) Extension of time	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida .
(ii) Rescheduling of mile stones	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
(iii) Shifting of date of start in case of delay in handing over of site	Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.
Schedule of handing over of site	On start date of work
Clause 5.2 Nature of Hindrance Register (either Physical or Electronic)	NA
Clause 6, 6A Clause applicable - (6 or 6A)	6 A
Clause 7	
Gross work to be done together with net payment / adjustment of advances for material	Rs. 8 lakh or reasonable part thereof to facilitate progress of work.

collected, if any, since the last such payment for being eligible to interim payment		
Clause 7A Whether Clause 7A shall be applicable		Yes. No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.
Clause 10A List of testing equipment to be provided by the contractor at site lab as required to completion and testing of the work to the satisfaction of Engineer-in-charge.		
Clause 10B (ii) Whether Clause 10 B (ii) shall be applicable		Not Applicable
Clause 10C Component of labour expressed as percent of value of work		15%
Clause 10CA		Not applicable(contractor should bear the risk of change of rate of materials)

S No.	Materials covered under this clause	Nearest materials (other than cement, steel reinforcement bars and structural steel) for which All India Wholesale Price Index to be followed	Base Price and its corresponding period of all the materials covered under clause 10 CA (June 2018)
			Base price (without GST) per MT (Rs.)
1	Cement	-	-NOT APPLICABLE-
(i)	Ordinary Portland Cement (PPC)	-	-NOT APPLICABLE-
2 (a)	Reinforcement Bars TMT-500D	-	-NOT APPLICABLE-

Clause 10CC		
Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column:		Not applicable for this work
Schedule of component of other Materials, Labour, POL etc. for price escalation.		
Civil construction materials (except materials covered under clause 10CA)/ Electrical construction Materials expressed as percent of total value of work		Not applicable for this work
Component of Labour- expressed as percent of total value of work.		Not applicable for this work
Component of P.O.L. expressed as percent of total value of work.		Not applicable for this work
Clause 11		
Specifications to be followed for execution of work		CPWD Specifications 2009, Volume-I and II

		with upto date correction slips till date of submission of tender and manufacturer's specification wherever applicable.				
Clause 12						
Type of work		Project and original work				
12.2. & 12.3 Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work in superstructure		50%				
12.5 (i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except earth work)		NA				
(ii) Deviation limit for items in earth work Sub Head of DSR or related items		NA				
Clause 16						
Competent authority for deciding reduced rates.		Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.				
Clause 18						
Tentative list of machinery, tools & plants to be deployed by the contractor at site:-						
Sl. No.	Equipment	Numbers (Tentative)				
1.	All tools and plants necessary for supply, installation, testing of all items of the schedule of quantity of work shall be deployed by the contractor at site. Necessary testing equipment and meters for testing of the installation at site shall be brought at site. For civil work, any other machinery required for completion of the work as per decision of Engineer-in-Charge.	As per Actual requirement				
Note: The above list is only indicative and not exhaustive.						
Clause 25						
Constitution of Dispute Redressal Committee (DRC)		Competent authority to appoint DRC				
DRC shall constitute one chairman and two members		Director, IAHE				
Place of arbitration		Noida				
Clause 36 (i)						
Requirement of technical representative(s) and recovery rate						
Sl. No	Minimum Qualification of Technical Representative	Designation of Technical Staff	Minimum experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
					Figures	Words.
1.	Graduate Engineer or Diploma Holder	Principal Technical Representative	3 years	1 No.	Rs. 30,000/- Per Month	Rs. Twenty Five thousand Per Month.

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Clause 42

(i)	(a)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2016 with upto date correction slips as on date of submission of tender.	
(ii)		Variations permissible on theoretical quantities: -	
	(a)	Cement for works with estimated cost put to tender not more than Rs. 5 lakh.	3% plus/minus
		For works with estimated cost put to tender more than Rs.5 lakh.	2% plus/ minus
	(b)	Bitumen	2.5% plus only and nil on minus side
	(c)	Steel reinforcement and structural steel sections for each diameter, section and category	2% plus/ minus
	(d)	All other materials.	Nil
RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION			
NA			

PART- B

CHAPTER-4

GENERAL CONDITIONS

1. The work has to be carried out in office of the building of Indian Academy of Highway Engineers (IAHE) at Sector-62, Noida (U.P.).
2. The work in general shall be carried out in accordance with the CPWD Specifications 2009 Vol. I & II with up-to-date correction slips unless and otherwise is specified in this tender document.
3. All the materials brought to the site by the contractor for use in the work as well as fabricated work shall be subject to the inspection and approval by the Engineer-in-charge. The contractor shall be required as directed by the Engineer-in-charge to get necessary tests carried out on materials and works. The samples of the materials shall be provided free of cost by the contractor. All other incidental expenditure to be incurred for testing of samples e.g. Packaging, sealing, transportation, loading, unloading etc. shall be borne by the contractor.
4. In case any material is rejected by the Engineer-in-charge, the same shall be removed from the site within 48 hours, failing which the same shall be got removed by the Engineer-in-charge at risk and cost of contractor.
5. Royalty, Octroi, Terminal Tax or any other taxes/charges etc. at prevalent rates shall have to be paid by the contractor himself and the rates quoted by him shall include these duties and nothing extra on this account shall be payable.
6. The contractor shall take all safety precautions to avoid accidents by exhibiting caution boards and by providing necessary barriers barricading at his own cost and all other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.
7. The contractor shall give due notices to Municipality, Police and / or other authorities that may be required under the law/ rules under force and obtain all requisite permissions/ licenses for temporary obstructions/ enclosures and pay all charges which may be leviable on account of his execution of the work under the agreement. Nothing extra shall be payable on this account.
8. All materials shall be got checked by the Engineer-in-Charge on receipt of the same at site before use.
9. The contractor shall carry out his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor (s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed, so as not to interfere with the operations of other contractors, or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of Engineer-in-Charge.
10. The contractor shall give the Engineer-in-charge on the 4th day of each month, a progress report of the work done during the previous month. The progress of work will be reviewed periodically by the Engineer-in charge with the contractor and shortfalls, if any, sorted out. The contractor shall thereupon take such action as may be necessary to bring back his work to schedule without any additional cost to the department.
11. The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all to

and fro carriage charges in connection therewith. The cost of tests shall be borne by the contractor.

12. The contractor shall prepare an integrated program chart with mile stones of completion of whole work except day to day maintenance. The program chart should include the following: -
 - a) Descriptive note explaining sequence of various activities.
 - b) Network (PERT/CPM / BAR CHART) in MS Projects or any other approved Program by the Engineer-in-charge.
 - c) Program for procurement of materials by the contractor.
 - d) Program of procurement of machinery/ equipments having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.
 - e) If at any time it appears to the Engineer-in-Charge that the actual progress of the work does not conform to the approved Program referred above, the contractor shall produce a revised Program showing the modifications to the approved Program to ensure completion of the work within the stipulated time for completion.
13. The submission for approval by the Engineer-in-Charge of such Programs or the furnishing of such particulars shall not relieve the contractor of any or his duties or responsibilities under the contract. This is without prejudice to the right of the Engineer-in-Charge to take action against contractor as per terms and conditions of the agreement.
14. The contractor shall quote his rates considering the specifications; terms & conditions and particular specifications and special conditions etc., and nothing extra shall be payable whatsoever unless otherwise specified.
15. The contractor shall be responsible for coordinating the activities of all works and essential progress of works as per milestone and laid down Programs.
16. The contractor shall be responsible for the watch and ward of the site/ property/ material provided by him against pilferage and breakage during the period of execution and thereafter till the work is physically handed over to the department.
17. Samples of all building materials, fittings and other materials/ articles required for execution of the work shall be got approved from the Engineer-in-Charge. Materials/ articles manufactured by the Firms of repute as indicated in tender documents and approved by the Engineer-in-Charge shall only be used. Materials/ articles classified, as "First Quality" by the manufacturer shall only be used. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.
18. The contractor shall be required to produce samples of all materials i/c material like sand, stone aggregates & bricks etc. to be arranged and procured by him sufficiently in advance to obtain approval of the Engineer-in-Charge. Subsequently the materials to be used in the actual execution of the work shall be strictly of the same quality of the samples approved. In case of variation in the quality, such materials shall be liable to rejection. The rejected material shall be immediately removed from the site of work by the contractor at his own cost. If the contractor fails to remove the rejected material from the site within 48 hours of their rejection by the Engineer-in-Charge or his authorized representative the same shall be got removed at the risk and cost of the contractor. No claim financially or otherwise shall be entertained on account of any rejection whatsoever.

19. The contractor shall ensure quality construction in a planned and time bound manner. Any sub- standard material or work beyond set out tolerance limits shall be summarily rejected by the Engineer-in-Charge.
20. The contractor shall require to make a sample flat each for up gradation works for approval of Engineer in charge.
21. Even ISI marked materials shall be subjected to quality test at the discretion of the Engineer-in- Charge besides testing of other materials as per the specifications described for the item/ material. Whenever ISI marked materials are brought to the site of work; the contractor shall, if required by the Engineer-in-Charge, furnish manufacturer's test certificate to establish that the material procured by the contractor for incorporation in the work satisfy the provisions of IS Codes relevant to the material and/or the work done.
22. The contractor shall make his own arrangement of water including boring of tube-wells required for execution of work and nothing extra shall be paid for the same. The water used shall conform to the requirements as laid down in IS: 456-2000. The contractor shall obtain necessary permission from Central Ground Water Board of Govt. of India before actually starting the boring work for a tube well. Nothing shall be paid extra on this account.
23. The day to day receipt and issue accounts of different brands of cement shall be maintained separately in the standard proforma by the Junior Engineer/Assistant Engineer-in-charge of the work and which shall be duly signed by the contractor or his authorized representative.
24. The contractor should maintain the registers for cement, paint, water proofing compound and other materials as required by the Engineer-in-Charge and these should be signed by the contractor or his authorized agent and the representative of the Engineer-in-Charge.
25. The contractor shall make his own arrangements for temporary electric connection, if required and make necessary payment including electric charges for its use direct to the authority concerned. The department will not at all be responsible for making arrangements in these regards. The department will provide all possible assistance by way of reasonable recommendation for obtaining electric connection to the concerned authorities but bears no responsibility for the same. In case local body fails to sanction/provide the electric connection or delays it, the contractor shall make his own arrangement by providing diesel generators of adequate capacity at his own cost.
26. The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of smoke, noise, streams and water-ways. He shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused thereon by the contractor. All waste or superfluous materials shall be carried away by the contractor without any reservation entirely to the satisfaction of the Engineer-in-Charge.
27. The rates quoted by the contractor are deemed to be inclusive of site clearance, setting out work, profile, establishment of reference bench mark, spot levels, construction of all safety and protection devices, barriers, preparatory works, working during monsoon, working at all depths, heights and locations etc. unless specified in the schedule of quantities.

28. No inflammable materials including P.O.L. shall generally be allowed to be stored at site. However, reasonable quantity may be permitted for storage subject to the compliance of all rules/ instructions issued by the competent authorities and as per the direction of Engineer-in-Charge.

Movement of labour and traffic at site

In the event of any restrictions being imposed by the Security agency, CPWD, Traffic Police or any other authority having jurisdiction in the area on the working or movement of labour /material, the contractor shall strictly follow such restrictions and nothing extra shall be payable to the contractor on this account. The loss of time on this account, if any, shall have to be made up by generating additional resources etc. General Security restrictions are given as under:

- a) The movement of trucks and vehicles shall be regulated in accordance with rules and regulations as approved by competent authority.
 - b) The contractor shall inform, in advance, the truck registration numbers, ownerships of the trucks, names and addresses of the drivers for necessary action by the Security agency.
 - c) Labour huts /stay of workmen will not be allowed at site.
 - d) Names and addresses of labour/ staff etc. working at site shall be furnished for security verification.
 - e) The labour / staff should not be changed too frequently once the verification of the character and antecedents is done.
 - f) After verification of antecedents of workers, identification badges will be issued to them by the contractor under the seal of the Engineer-in-Charge or his representative. The cost of badges would be borne by the contractor.
 - g) As and when there will be security requirements, certain additional restriction (s) can be imposed as per the requirement of the situation.
 - h) No claim whatsoever will be entertained by the department on account of any restriction (s) imposed by the security agencies in execution of work including temporary suspension of work due to V V I P movements.
 - i) (i) The contractor shall be responsible for behavior and conduct of his labour. No labour with doubtful integrity or having a bad record shall be engaged by the contractor.
29. The contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipments to execute the work. Many items like stone masonry & stone cladding work, stone flooring & other specialized flooring work, wood work, aluminium work, separation joints will specifically require engagement of skilled workers having experience particularly in execution of such items.
30. No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the government property and work for which the payment has been advanced to him under the contract and he shall make good the same at his risk and cost.

Environmental Management Action Plan

The contractor is required to adhere the following instructions of environmental management action plan.

Pre-construction stage

All vehicles, equipment and machinery to be procured for construction will confirm to the relevant Bureau of India Standard (BIS) norms.

Emission from the vehicles must conform to environmental norms.

Sprinkling of water can mitigate dust produce from the vehicular movement and other site activities.

Construction of bins for disposal of waste

The pre-identified dump locations will be a part of solid waste management plan to be prepared by the contractor in consultation with Engineer-in-Charge.

Contractor will get approved the location of disposal site prior to commencement of the excavation on any section of the project location.

Contractor will ensure that any spoils of material will not be disposed off in any municipality solid waste collection bins.

Pollution

Water Pollution

- a** The Contractor will take all precautionary measures to prevent the waste water during construction to accumulate anywhere.
- b** The wastewater arising from the project is to be disposed off in the manner that is acceptable to the Engineer-in-charge and conforming to Delhi Pollution Control committee norms.

Air and Noise Pollution

- a** Contractor will use dust screens and sprinkle water around the construction site to arrest spreading of dust in the air and surrounding areas.
- b** Contractor will ensure that all vehicles, equipment and machinery used for construction are regularly maintained and confirm that emission levels comply with environmental emission standards/norms.
- c** For controlling the noise from Vehicles, Plants and Equipments, the Contractor will conform the following:
- d** All vehicles and equipment used in construction will be fitted with exhaust silencers.
- e** Servicing of all construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective will be replaced.
- f** Noise emission from compactors (rollers) front loaders, concrete mixers, cranes (movable), vibrators and saws should be less than 75 db (A).
- g** As per the Standards/Guidelines for control of Noise Pollution from Stationary Diesel Generator (DG) Sets, noise emission in db (A) from DG set (15 - 500 KVA) should be less than $94+10 \log_{10}(\text{KVA})$. The standards also suggest construction of acoustic enclosure around the DG set and provision of proper exhaust muffler with insertion loss of minimum 25db(A) as mandatory.

Air pollution of dust from construction and demolition activity

(A) As per NGT Order dated 04-12-2014

- 1.** No government, authority, contractor, builders or any person would be permitted to store/dump construction material or debris on metalled road.

2. Beyond the metalled road the area where such the construction material or debris can be stored shall be physically demarcated by officers of all the concerned Authorities /Corporation ensuring that it would not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured that no accidents occur on account of such permissible storage.
3. Every builder, contractor or person shall ensure that the construction material is covered by tarpaulin and all other precautions should be taken to ensure that no dust particles are permitted to pollute air quality as a result of such storage.

It shall also be ensured that appropriate protection measures are taken by raising wind breakers of appropriate height on all sides of the plot/area using plastic and /or other similar material to ensure that no construction material dust fly outside the plot area and it will be the builder /contractor responsibility to ensure that their activity does not cause any air pollution during course of construction and /or storage of material or construction activity. This condition shall be strictly adhered to every builder, contractor, person or authority. In the event of default they shall be liable to be prosecuted under the law in force, as well as for causing environmental pollution and will be liable to be pay compensation which would be determined by Tribunal in accordance with law.

4. All the trucks or vehicles of any kind which are used for construction purposes/or are carrying construction material like cement, sand or other allied material should be fully covered. The vehicles should be properly cleaned, should be dust free and every necessary precautions is to be taken to ensure that enroute their destination, the dust, sand or any other particles are not permitted to be released in air/contaminate air. Any truck not complying with the above directions would not be permitted to enter NCR, Delhi.

(B) As per NGT Order dated 10.04.2015

1. Every builder or owner shall put tarpaulin on scaffolding around the area of construction and the building. No person including builder, owner can be permitted to store any construction material particularly sand on any part of the street, roads in any colony.
2. The construction material of any kind that is stored in the site will be fully covered in all respects so that it does not disperse in the Air in any form.
3. All the construction material and debris shall be carried in the trucks or other vehicles which are fully covered and protected so as to ensure that the construction debris or the construction material does not get dispersed into the air atmosphere, in any form whatsoever.
4. The dust emissions from the construction site should be completely controlled and all precautions taken in that behalf.
5. The vehicles carrying construction material and construction debris of any kind should be cleaned before it is permitted to ply on the road after unloading of such material.
6. Every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris

shall be provided with mast to prevent inhalation of dust particles.

7. Every owner and or builder shall be under obligation to provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable dust emission.
 8. It shall be the responsibility of every builder to transport construction material and debris waste to construction site, dumping site or any other place in accordance with rules and in terms of this order.
 9. All to take appropriate measures and to ensure that the terms and conditions of the earlier order and these orders should strictly comply with by fixing sprinklers, creations of green air barriers.
 10. Compulsory use of wet jet in grinding and stone cutting.
 11. Wind breaking walls around construction site.
 12. All the builders who are building commercial, residential complexes which are covered under the EIA Notification of 2006 shall provide green belt around the building that they construct. All Authorities shall ensure that such green belts are in existence prior to issuance of occupancy certificate.
 13. All builders shall ensure that C&D waste is transported in terms of this order to the site in question only and due record in that behalf shall be maintained by the builders, transporters and NCR of Delhi.
 14. Even if constructions have been started after seeking Environmental Clearance under the EIA notification 2006 and after taking other travel but is being carried out without taking the preventive and protective environmental steps as stated in this order and MoEF guidelines, 2010, the State Government, SPCB and any officer of any department as aforesaid shall be entitled to direct stoppage of work.
 15. " Material storages/warehouses- Care should be taken to keep all material storages adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust/particulate emissions. Fabrics and plastics for covering piles of soils and debris is an effective means to reduce fugitive dust".
31. Procurement of Construction Materials
- a** All vehicles delivering construction materials to the site will be covered to avoid spillage of materials and maintain cleanliness of the roads.
 - b** Wheel tyres of all vehicles used by of the contractor, or any of his sub-contractor or material suppliers will be cleaned and washed clear of all dust/mud before leaving the project premises
 - c** Contractor will arrange for regular water sprinkling at least twice a day (i.e. morning, and evening) for dust suppression of the construction sites and unpaved roads used by his construction vehicles.
 - d** The unloading of materials which are required to be approved by the Engineer-in-Charge, at construction site will be restricted to daytime only. For this purpose the information shall be given to the Engineer-in-Charge at least one day in advance.

Personnel Safety Measures for Labour

This shall be ensured as per the CPWD Safety Code given in "General conditions of contract for CPWD works - 2014".

Risk from Electrical Equipment

- a** The contractor will comply the relevant industrial electrical safety legislations.
- b** The Contractor will take adequate precautions to prevent danger from electrical equipment i.e. no material will be so stacked or placed as to cause danger or inconvenience to any person or the public.
- c** All necessary fencing and lights will be provided to protect the public.
- d** All electric machines to be used in the construction will conform to the relevant Indian Standards (IS) codes, will be free from patent defect, will be kept in good working order, will be regularly inspected and properly maintained as per IS provision and to the satisfaction of the Engineer-in-charge.
- e** The contractor will arrange for a first aid kit including an adequate supply of sterilized dressing materials and appliances to meet emergencies. He will also arrange suitable transport to take injured or sick person(s) to the nearest hospital.
- f** The contractor will provide, erect and maintain informatory/safety signs, hoardings written in English and Hindi wherever required or as suggested by the Engineer-in-charge.

- 32. The contractor shall use double scaffolding in the work.
- 33. The contractor shall make at his own cost all necessary arrangements for maintaining water level, in the area where works are under execution low enough so as not to cause any harm to the works or problems in carrying out with the execution and the rates for all items of work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payment shall be made. This will include water coming from any source, such as rains, accumulated water, floods, leakages from sewer and water mains, sub-soil water table being high or due to any other cause whatsoever. The contractor shall make necessary provision of pumping, dredging, bailing out water coming from all above sources and excavation and other works shall be kept free of water by providing suitable system approved by Engineer-in-charge.

Cement:

Every delivery of cement shall be accompanied by producer's certificate conforming that the supplied cement confirms to relevant specifications. These certificates shall be endorsed to the engineer in charge for his record.

The cement shall be brought at site in bulk supply as decided by the Engineer-in-charge.

Cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) constructed by the contractor at his own cost as per sketch of General conditions of contract for CPWD works-2014 with weather proof roofs and walls. The size of the cement godown is indicated in the sketch for guidance only. The actual size of godown shall be as per site requirements and as per the direction of the Engineer in charge and nothing extra shall be paid for the same. The decision of the Engineer-in-charge regarding the capacity

required/needed will be final. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with Engineer-in-charge or his authorized representative and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Performa and signed daily by the contractor or his authorized agent in token of its correctness.

Samples of cement arranged by the contractor shall be taken by the Engineer-in-charge and got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within three days of written order from the Engineer-in-charge to do so.

The contractor shall supply free of charge the cement required for testing. The cost of tests shall be borne by the contractor/department in the manner indicated below:

- (i) By the contractor if, the results show that the cement does not conform to relevant BIS codes.
- (ii) By the department if the results show that the cement conforms to relevant IS codes.

The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical, consumption of cement shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. No payment for excess consumption of cement will be allowed.

For non-schedule items, the decision of the Superintending Engineer regarding theoretical quantity of cement, which should have been actually used, shall be final and binding on the contractor.

Cement brought to site and remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.

Reinforcement

The reinforcement shall conform to relevant BIS Specifications and it should be laid as per CPWD Specifications.

The rate of item of reinforcement of RCC work includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specifications.

The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement.

To ensure proper cover, only factory made round type cover blocks will be used to avoid displacement of bars in any direction.

The contractor shall procure thermo mechanically treated (TMT) steel reinforcement bars conforming to BIS 1786-2008 specifications of Fe 500-D grade and CPWD specifications from main producers as SAIL, Tata Steel Ltd., RINL, Jindal Steel & Power LTD. and JSW Steel Ltd. or any other producer as approved by CPWD. The contractor shall have to obtain and furnish test certificate to the Engineer in charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to BIS codes, the same shall stand rejected and shall be removed from the site of work by the contractor at his own cost within three days of written orders from the Engineer in charge to do so.

The steel reinforcement shall be brought at site as per direction of the Engineer-in-charge.

The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

The contractor shall supply free of cost the required steel bars for testing. The cost of tests shall be borne by the contractor.

The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein.

Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.

Reinforcement including authorized spacer bars and overlaps shall be measured in length of different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.

Record of actual sectional weights shall also be kept dia wise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer in charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.

- (a) If the derived weight as in sub-para (iii) above is less than the standard weight as in sub-para (ii) above, then the Derived Actual Weight shall be taken for payment.

- (b) If the derived actual weight is found more than the standard weight, than standard weight as worked out in sub para (ii) above shall be taken for payment nothing shall be paid extra for the difference in Derived Actual Weight and standard weight.

Mixing different types of grade of bars shall not be allowed.

The reinforcing steel brought to site of work shall be stored on brick timber platform of 30 to 40 cm height, nothing extra shall be paid on this account.

Water:

The contractor shall make his own arrangement for providing water for construction and drinking purpose. Water charges shall not be recovered on account of it. Contractor shall get the water tested from any approved laboratory by the Engineer-in-charge at regular interval as per the CPWD specifications 2009 vol.-I & II). All expenses towards collection of samples, packing transportation and testing charges, etc. shall be borne by the contractor.

Form Work:

The work shall be done in general as per CPWD Specifications 2009 Vol -I & II.

Only M.S. centering / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor to be approved by the Engineer-in-Charge.

Double steel scaffolding having two sets of vertical supports shall be provided for external wall finish, cladding etc. The supports shall be sound and strong, tied together with horizontal pieces over which scaffolding platform shall be fixed.

Nothing extra shall be paid for the centering and shuttering, circular in shape whenever the form work is having a mean radius exceeding 6m in plan.

In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the top level of RCC surface shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the contractor.

As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept 12 to 20mm or as required, lower than general floors shuttering should be adjusted accordingly. Nothing extra is payable on this account.

Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces required to complete the shuttering panels.

Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

For the execution of centering and shuttering, the contractor shall use propriety "Reebole" chemical mould release agent of FOSROC or equivalent as shuttering oil as approved by Engineer-in-charge and nothing extra shall be paid on this account.

Work is mainly related to upgradation /maintenance work of existing building.

INTEGRITY AGREEMENT

To be signed by the bidder and same signatory competent / authorised to sign the relevant contract on behalf of IAHE.

This Integrity Agreement is made at on this day of 20.....

BETWEEN

President of India represented through Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida 'Principal/Owner ', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
(Name and Address of the Individual/firm/Company) through (Hereinafter referred to as the (Details of duly authorized signatory) "Bidder/Contractor " and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No.) (hereinafter referred to as " Tender/Bid ") and intends to award, under laid down organizational procedure, contract for (Name of work) hereinafter referred to as the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1. The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a. No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b. The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - c. The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
2. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

- a. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
- b. The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
- c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
- e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose (with each tender as per proforma enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
2. Forfeiture of EMD/Performance Guarantee/Security Deposit : If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or

terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3. Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of Indian Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
3. If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub- contractors/sub-vendors.
2. The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3. The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IAHE.

Article 7- Other Provisions

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the Head quarters of the Division of the Principal/Owner, who has floated the Tender.
2. Changes and supplements need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
4. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.
5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other

legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact. IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

..... (For and on behalf of
Principal/Owner)

..... (For and on behalf of
Bidder/Contractor) WITNESSES:

1. (signature, name and address)

2. (signature, name and address)

Place:

Dated:

FORM OF EARNEST MONEY (BANK GUARANTEE)

WHEREAS, contractor..... (Name of contractor) (hereinafter called "the contractor") has submitted his tender dated (date) for the construction of (name of work) (hereinafter called "the Tender")

KNOW ALL PEOPLE by these presents that we (name of bank) having our registered office at (hereinafter called "the Bank") are bound unto **Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida*** (hereinafter called "the Engineer-in-Charge") in the sum of Rs..... (Rs. in words) for which payment will and truly to be made to the said Engineer-in-Charge the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this day of20... .

THE CONDITIONS of this obligation are:

- 1) If after tender opening the contractor withdraws his tender during the period of validity of tender (including extended validity of tender) specified in the form of tender;
- 2) If the contractor having been notified of the acceptance of his tender by the engineer-in-charge:
 - a) fails or refuses to execute the form of agreement in accordance with the Instructions to contractor, if required; OR
 - b) fails or refuses to furnish the performance guarantee, in accordance with the provisions of tender document and Instructions to contractor, OR
 - c) fails or refuses to start the work, in accordance with the provisions of the contract and Instructions to contractor, OR

d) fails or refuses to submit fresh bank guarantee of an equal amount of this bank guarantee, against security deposit after award of contract.

We undertake to pay to the Engineer-in-Charge either up to the above amount or part thereof upon receipt of his first written demand, without the Engineer-in-Charge having to substantiate his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by him is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

*** Deputy Director, Indian Academy of Highway Engineers (IAHE), A-5, Sector-62 Noida.**

This guarantee will remain in force up to and including the date* after the deadline for submission of tender as such deadline is stated in the instructions to contractor or as it may be extended by the engineer-in-charge, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE

SIGNATURE OF THE BANK

WITNESS

SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 120 days from last date of receipt of tender.

FORM OF PERFORMANCE SECURITY BANK GUARANTEE BOND

1. In consideration of the President of India (hereinafter called “The Government”) having offered to accept the terms and conditions of the proposed agreement between _____ and _____ (Hereinafter called “the said contractor(s)”) _____ for the work _____ (hereinafter called “the said agreement”) having agreed to production of a irrevocable bank guarantee for Rs. _____ (Rupees _____ only) as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement, we _____ (indicate the name of the bank) (hereinafter referred to as “the Bank”) hereby undertake to pay to the Government an amount not exceeding Rs. _____ (Rupees _____ only) on demand by the Government.

2. We _____ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the Government stating that the amount claimed as required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees only).

3. We, the said bank further undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. We _____ (indicate the name of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till engineer-in-charge on behalf of the government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We _____ (indicate the name of the bank) further agree with the Government that The Government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We _____ (indicate the name of the bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.
8. This guarantee shall be valid upto _____ unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. _____ (Rs. _____ only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.
Dated the _____ day of _____ for
_____ (indicate the name of bank).

PERFORMANCE GUARANTEE

(i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of award/acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in schedule 'F' on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of bank guarantee (BG) in accordance with the prescribed form annexed hereto from any scheduled Bank operable at Noida/Delhi.

(ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.

(iii) The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:

(a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.

(b) Failure by the contractor to pay President of India any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.

(iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the President of India.

GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS.

The agreement made this.....day of Two Thousand..... between.....S/o of Shri (Hereinafter called the GUARANTOR of the one part) and the President of India (hereinafter called the Government of the other part). WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract) dated.....and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render the building and structures in the said contract recited completely water and leak proof.

AND WHEREAS THE GURANTOR agreed to give a guarantee to the affect that the said work will remain water and leak proof, for ten years from the date of giving water proofing treatment.

NOW THE GUARANTOR hereby guarantees that work executed by him will render the structures completely leak proof and the minimum life of such water proofing treatment shall be ten years to be reckoned from the date of expiry of maintenance period prescribed in the contract.

The decision of the Engineer in Charge with regard to nature and cause of defect shall be final.

During the period of guarantee, the guarantor shall make good all defects and in case of any defect found render the building water proof to the satisfaction of the Engineer in Charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantors cost and risk The decision of the Engineer in Charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to execute the water proofing or commits breach thereunder, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and or cost incurred by the Government, the decision of the Engineer in Charge will be final and binding on both the parties.

IN WITNESS WHERE OF these presents have been executed by the obligator.....and.....by for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of : 1..... 2.....

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA BY.....

1..... 2.....

FORM OF BANK GUARANTEE BOND FOR SECURITY DEPOSIT FOR THE WORK OF WATER-PROOFING WORKS

1. In consideration of the President of India (hereinafter called "The Government") having agreed to exempt (hereinafter called the said contractor(s)) from the demand, under the terms and conditions of the Agreement No. dated.....Made between and For the work of (hereinafter called "The said Agreement") security deposit for the due fulfillment by the said contractor(s) of the terms & conditions contained in the said Agreements for the work of Anti water proofing work on production of a irrevocable Bank Guarantee for (10 % of contract value of sub work on prorata basis) Rs (Rupees only), for ten years we (indicate the name of the bank) (hereinafter referred to as "the Bank) hereby undertake to pay to the Government an amount not exceeding Rs. (Rupees only) on demand by the Government.

2. We (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under the Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupees..... only).

3. We (indicate the name of the bank) further undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by as under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. We (indicate the name of the Bank) further agree that the guarantee hereinafter contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the

government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of the Government certified that the terms and condition of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We (indicate name of the bank) further agree with the Government that the government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to for bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractors(s) or for any bearance, act of commission of the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter of thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of Bank or the contractor(s).

7. We (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing

8. This guarantee shall be valid upto unless extended on demand by Government. Now withstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged

Date the day of for
..... (indicate the name of Bank)

CHAPTER-5

Minimum Quality Assurance Plan (CIVIL WORK)

1. Maintenance of Register of Tests:

- i. All the registers of tests carried out at Construction Site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer- in- charge the time of issue of award letter.
- ii. All Samples of materials including Cement Concrete Cubes shall be taken by Contractor jointly with DD in charge of work and out of this at least 50% samples shall be taken in presence of Engineer- in -charge.
- iii. All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor in presence of Engineer -in- charge .
- iv. All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be presented before DD for their review.
- v. Contractor shall be responsible for safe custody of all the test register.

2. Maintenance of Material at Site (MAS) Register :

- i. All the MAS Registers including Cement and Steel Registers shall be maintained by Contractor which shall be issued to the contractor by Engineer-in- charge along with the award letter.
- ii. The contractor shall get 100% test checked by Deputy Director(DD).
- iii. The contractor shall get MAS Register test checked by DD at least twice a week.
- iv. Cement register shall be got reviewed by DD at least one in a month by the contractor.

CHAPTER-6

SPECIAL CONDITIONS

1. The agency is advised to inspect the site before tendering.
2. Unless otherwise provided in the Schedule of quantities the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
3. The contractor shall make his own arrangements for obtaining electrical service connection if required and make necessary payments directly to the department concerned.
4. Other agencies doing works related with this project will also simultaneously execute the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work pipes, cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for other agencies. Conduits for electrical wiring/cables will be laid in a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rates shall be paid for the same.
5. Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. the contractor shall be bound to follow all such restriction/instructions and nothing extra shall be payable on this account.
6. (a) The building work will be carried out in the manner complying in all respects with the requirements of relevant by-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-Charge and nothing extra will be paid on this account.
(b) Deleted
(c) The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fees and charges which he may be liable.
7. The contractor shall give a performance test of the entire installation(s) as per standing specifications or directed by Engineer-in-charge before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
8. Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been in built in the items and nothing extra shall be payable (or) extra cement considered in consumption on this account.
9. Testing of materials:
Samples of various materials required for testing shall be provided free of charge by the contractor. Testing charges, if any, shall be also be borne by the contractor.

10. The structural and architectural drawings shall at all times be properly co-related before executing any work. Any discrepancy noticed shall be brought to the notice of Engineer-in-Charge for his decision. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawings relating to the relevant item, the former shall prevail unless and otherwise given in writing by the Engineer-in-charge.
11. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department or procured by the contractor and nothing extra shall be payable to the contractor on their accounts.
12. The full nomenclature of items shall be adopted in preparing abstract of final bill in the measurement book and also in the bill form for final bill.
13. In compliance of Clause 5.1 of GCC The contractor shall be responsible for any activity authorized or unauthorized going on within the site area handed over to him by the department for construction, development/maintenance or for any other purpose.
14. Within 15 days of award of work, the agency shall submit the method statement as how he proposes to execute the work with quality and specification, sequencing of Item including Quality assurance plan for approval of Engineer-in Charge.
15. A detailed program in the form of precedence network diagram is to be submitted to the Engineer -in-Charge within 7 days of award of work. The programme chart should comply the milestone given in Schedule F
16. (i) Deleted.
(ii) The contractor, through his engineer, shall ensure quality construction in a planned and time bound manner. Any sub-standard Material/Work beyond set out tolerance limits shall be summarily rejected by the Engineer-in-Charge.
17. The work shall be executed as per the programme approved by the Engineer -in-Charge and it shall be so arranged as to have full co-ordination with other agencies executing building work. No claim for idle labour shall be entertained, nor, any claim on account of the delay in completion of the building work shall be liable.
18. Contractor shall be allowed 7 days mobilization from the date of issue of letter of award for the work. During this period contractor will mobilize plant & equipment and complete other preliminaries like approval of quarry, mix design, trial mix etc. No concreting shall be done until the mix-design is approved by the Engineer -in-Charge. In case of change of source or characteristic properties of the ingredients used in the concrete mix-design during the work, a revised concrete mix-design conducted by laboratory approved & shall be submitted by the contractor as per the direction of the Engineer -in-Charge. Nothing extra shall be paid on this account.
19. The contractor or his authorized representative should always be available at the site of work to take instructions from department officers, and ensure proper execution of work.
20. No work shall commence in the absence of contractor's Engineers and they shall certify writing about the correctness of layout alignment of structure.
21. Royalty at the prevalent rates and all other incidental expenditure shall have to be paid by the contractor on all the boulders, metals, shingle, earth sand, bajri etc.

collected by him for the execution of the work directly to the concerned Revenue Authority of the State or Central Government. His rates are deemed to include all such expenditure and nothing extra shall be paid.

22. No payment will be made to the contractor for damage caused by rains, or other natural calamity during the execution of the works and no such claim on this account will be entertained.
23. The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants of adjacent properties and to the public in general and to prevent any damage to such properties.
24. All materials which are specified to be tested at the manufacture's works shall satisfactorily pass the test in presence of the authorized representative of Engineer-in-Charge before being used in the work.
25. The work of electrification, horticulture and other internal and external services, if any may be carried out simultaneously by other agencies with the work being tendered for against the enclosed contract documents. The contractor shall afford necessary facilities for the same.

26. Supervision of work:

All construction work shall be supervised by the contractor including his duly authorized engineers/representatives. Contractor shall provide materials and workmanship to the best of their representative kind, and shall be fully responsible for executing the work as per prescribed specifications, latest BIS Codes of Practice and Drawings and other relevant specifications.

27. Quality Control:

(a) Contractor shall be fully responsible for quality of work be executed as per prescribed specification, relevant BIS codes and drawings and other relevant specifications.

(b) The Engineer-in-Charge will examine the work executed from the point of view of scope of work, and specifications for the various items before the work is finalized. If during any of the visit, use of sub-standard material or improper workmanship is noted by the Engineer-in-Charge or his superiors, the same shall also be promptly rectified on getting a written notice to do so.

28. Should there be any discrepancy due to incomplete description/ambiguity or omission in the drawings and other documents, whether original or supplementary, forming the contract, either found on completion or during currency of the installation work, the contractor shall immediately, on discovering the same, draw the attention of the Engineer-in-Charge, whose decision shall be final and binding on the contractor.

29. Deleted

30. Factory made materials & Items shall be procured only from reputed & approved manufacturer or their authorized dealers.

31. The contractor will have to work according to the programme of the work, decided by the Engineer-in-Charge. The contractor shall also construct a sample unit complete

in all respect within time specified by the Engineer-in-charge and this sample unit shall be got approved from the Engineer-in-charge before mass construction is taken up. No extra claim what so ever beyond the payments due at agreement rates will be entertained from the Contractor on this account.

32. The contractor shall take instructions from the Engineer-in-Charge for stacking of materials in any place. No excavated earth or building material shall be stacked over areas where other buildings, roads, services of compound walls are to be constructed.

33. If as per municipal rules the huts for labour are not to be erected at the site of work by the contractors, the contractors are required to provide such accommodation as is acceptable to local bodies and nothing extra shall be paid on this account.

34. Cement bags shall be stored in separate godowns to be constructed by contractor at his own cost as per sketch which is only indicative and actual size will depend on the site requirements as per CPWD Specification 2009 (Vol.I to II). With upto date C.S and revised CPWD Specification 2002 for cement concrete, cement mortar and R.C.C. work in pursuance (IS: 456-2000) with weather proof roof and walls. Each go down shall be provided with a single door with two locks. The keys of one lock shall remain with CPWD Engineer-in-Charge of work and that of the other lock with the authorized agent of the contractor at the site of work so that the cement is removed from the go down according to the daily requirement with the knowledge of both the parties and proper account maintained in standard proforma.

35. The contractor shall be fully responsible for the safe custody of the materials even if the materials are under double lock system.

36. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials and shall construct suitable go downs, yards at the site of work for storing all other materials so as to be safe against damage by sun, rain, damages, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose at his cost.

37. All materials shall be got checked by the Engineer-in-Charge of the works on receipt of the same at site before use.

38. Deleted.

39. Deleted.

40. The contractor is required to deploy resources as per availability of site. However, no claim will be entertained for idle labour, idle machinery, idle technical/ no-technical staff, idle T&P etc.

41. Contractor shall not divert any advance payments or part thereof for any work other than that needed for completion of the contracted work. All advance payments received as per terms of the contract (i.e. mobilization advance, secured advance against materials brought at site, secured advance against plant & machinery and / or for work done during interim stages, etc.) are required to

be re-invested in the contracted work to ensure advance availability of resources in terms of materials, labour, plant & machinery needed for required pace of progress for timely completion of work.

42. All running account bills preferred by the contractor for advance payments shall be processed only if Engineer-in-Charge is satisfied that up to date investments (excluding security deposit & performance guarantee, which are not considered as investments) made by the contractor against contracted work are more than the payments received. Accordingly, all running account bills shall be supported with an account of up to date payments received vis-à-vis up to date investments made on the work to enable engineer-in-charge are properly utilized only on the work and nowhere else.
43. Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the "CPWD Specifications 2009 Vol. I & II" with up to date correction slips and as per instructions of Engineer-in-Charge. Wherever CPWD Specifications are silent, the latest IS Codes / Specifications shall be followed and the rates should be all inclusive.
44. Any reference made to any Indian Standard Specifications, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards upto last date of receipt of tenders. **The Contractor shall keep at his own cost all such publications including relevant Indian Standard applicable to the work at site.**

CHAPTER- 7

ADDITIONAL CONDITIONS FOR CEMENT & STEEL

1. The contractor shall procure 43 grade ordinary Portland cement conforming to IS 8112/ Portland Pozzolana Cement conforming to IS 1489 (Part-I) as required in work, from reputed manufacturers of cement having a production capacity not less than one million tonnes or more per annum, such as **ACC, Ultratech, Vikram, Shree Cement, Ambuja, Jaypee Cement, Century Cement & J.K. Cement** or from any other reputed cement Manufacturer having a production capacity not less than one million tones per annum as approved by ADG for that sub region.

The bidders may also submit a list of names of cement manufacturers which the propose to use in the work. The tender accepting authority reserves rights to accept are reject name (s) of cement manufacturer(s) which the tender proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tender fully or partially.

The supply of cement shall be taken in 50 kg bags bearing manufacturer's name and ISI marking. Samples of cement arrange by the contractors shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS codes. In case of test results indicate that the cement arrange by the contractor does not conform to the relevant BIS Codes, the same shall stand rejected, and it shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so.

2. The cement shall be brought at site in bulk supply of approximately 25 tonnes or as decided by the Engineer-in-charge.

The cement godown of the capacity to store a minimum of 500 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made.

3. Double lock provision shall be made to the door of cement godown. The keys of one lock shall remain with CPWD Engineer-in-charge or his authorized representative and the keys of the other lock shall remain with the contractor. The contractors shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.

4. The cement shall be got tested by the Engineer-in-Charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laborites. The cost of tests shall be borne by the contractor / department in the manner indicated below:

- (a) By the contractor, if the result shows that the cement does not conform to relevant BIS code.
- (b) By the department, if the result shows that the cement conforms to relevant BIS codes.

5. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case of cement consumption is less than theoretical consumption including permissible variation; recovery at the rate show prescribed shall be made. In case of excess consumption no adjustment need to make.
6. Cement brought to site and cement remaining unused after completion of work shall not be removed form site without written permission of Engineer-in-Charge.
7. The damaged cement shall be removed from the site immediately by the contactor on receipt of a notice in writing form the Engineer-in-Charge. If he does not do so within three days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.

Additional condition for Steel Reinforcement Bars

1. The contractor shall procure TMT bars of **Fe500D grade** from primary producers such as **SAIL , Tata Steel Ltd., RINL, Jindal Steel & Power LTD. and JSW Steel Ltd.** or any other producer as approved by CPWD who are using iron ore as the basic raw material/input and having crude steel capacity of 2.0 Million tonnes per annum and above.

In case of non-availability of steel from Primary Producers than the NIT approving authority may permit use of TMT reinforcement bars procured from secondary producers. In such cases following conditions are to be stipulated in the NIT :

- a. The grade of the steel should be **Fe500D grade** to be procured as per BIS 1786-2008.
 - b. The secondary producers must have valid BIS license to produce HSD bars conforming to IS 1786 : 2008. In addition to BIS license, the secondary producer must have valid licence form either of the firms **Tempcore, Thermex Evcon Turbo & Turbo Quench** to produce TMT Bars.
 - c. The TMT bars procured form primary producers shall conform to manufacture's specifications.
 - d. The TMT bars procured form secondary producers shall conform to the specifications as laid by **Tempcore, Thermex, Evcon Turbo & Turbo Quench** as the case may be.
 - e. TMT bars procured either from primary producers or secondary producers, the specifications shall meet the provisions of IS 1786 : 2008 pertaining to **Fe500D grade** of steel as specified in the tender.
2. The contractor shall have to obtain and furnish test certificates to the Engineer-in-charge in respect o f all supplies of steel brought by him to the site of work.

3. Sample shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para (1) (d) & (1) (e) above, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the Engineer-in-Charge to do so.
4. The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more, or as decided by the Engineer-in-Charge.
5. The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
6. For checking nominal mass tensile strength bend test, re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below.

Size of bar	For consignment below 100 Tones	For consignment over 100 Tones
Under 10mm dia bars.	One sample for each 25 Tones or part thereof.	One sample for each 40 Tones or part thereof.
10mm to 16mm dia bars.	One sample for each 35 Tones or part thereof.	One sample for each 45 Tones or part thereof.
Over 16mm dia bars.	One sample for each 45 Tones or part thereof.	One sample for each 50 Tones or part thereof.

7. The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of test shall be borne by the contractor.
8. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.
9. The steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-Charge.

CHAPTER-8

PARTICULAR SPECIFICATIONS

1.0 GENERAL

The work shall be executed and measured as per metric dimensions given in the Schedule of quantities, drawings etc. (F.P.S. units wherever indicated are for guidance only).

The following modifications in the above specifications and some additional specifications shall however apply:

All stone aggregate and stone ballast shall be of hard stone variety to be obtained from quarries approved by the Engineer-in-Charge.

Sand to be used for cement concrete work, mortar for masonry and plaster work shall be of standard quality. Sand shall be obtained from the source to be got approved from the Engineer-in-Charge and screened as required. The same shall consist of hard siliceous material. It shall be clean sand.

Wherever any reference to any Indian Standard Specification occurs in the documents relating to this contract the same shall be inclusive of all amendments issued their to revision thereof if, any, upto the date of receipt of tenders.

Unless otherwise specified in the schedule of quantities the rates for all items of the work shall be considered as inclusive of pumping out or bailing out water if required for which no extra payment will be made. This will include water encountered from any source, such as rains, floods, and sub-soil water level being high due to any other cause whatsoever. However, payment for pumping/bailing out of water for one time will made as per Agreement item if ponding of water is found at site at the time of start of work.

All the materials required to be tested shall be tested as per provisions of the relevant B.I.S. Codes. Should there be any difference between acceptances CRITERIA given in B.I.S. Codes, C.P.W.D. Specifications and special conditions, the acceptance CRITERIA shall be in the order of precedence as mentioned in this document.

2.0 WATER PROOFING TREATMENT: The water proofing items shall be got approved from Deputy Director, IAHE Noida before any execution of water proofing item.

While doing treatment of roof surface, it shall be ensured that the outlet drain pipes have been fixed and mouths at the entrance have been eased and rounded off properly for easy flow of water.

The surface where the waterproofing is to be done, shall be thoroughly cleaned with wire brushes. All loose scales shall be removed and dusted off. The existing surface shall be treated with neat cement slurry admixed with proprietary water proofing compound(as mentioned in NIT), to penetrate into crevices and fill up all the pores in the surface. This cement slurry shall also be applied at the junction of parapet and terrace slab including the

vertical face of the parapet. The finished surface, after water proofing treatment, shall have minimum slope of 1 in 80. The rate shall include the cost of all labour and materials involved in all the operations described above.

Water proofing material as specified in the schedule of quantities and approved by Engineer-in-Charge should be procured from the Authorised distributor accompanied with Test Certificate of the product with batch number & date etc complete as per the direction of Engineer -in- Charge.

GUARANTEE FOR WATER PROOFING TREATMENT

The contractor shall give Ten years performance guarantee in the prescribed proforma (specimen appended) for the water proofing treatment. In addition 10% (Ten percent) of the cost of these items shall be retained as security, to watch the performance of the work executed. However, half of this amount (withheld) shall be released after maintenance period of Five years, after the completion of the work, if no defect come to the notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days and, if not attended to, the same shall be got done by other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the treatment once every year and make good any defect observed. However, the 10 % security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

3. MANUFACTURER'S TEST CERTIFICATE : The contractor, if required by the Engineer-in-Charge, shall produce manufacturer's test certificates for any material or particular batch of materials supplied by him. The test carried out shall be as per relevant specifications / Indian standard codes.

3.1 BRICK WORK : Bricks shall be obtained from kilns approved by the Engineer-in-Charge and shall be of size as per site requirement.

4.0 R.C.C. WORK.

4.1 In respect of projected balconies, projected slabs at roof level and projected verandah, the payment for the RCC work shall be made under the item of RCC Slabs, the payment for centering and shuttering of such, items shall similarly be paid under the item of centering and shuttering of RCC slab. Nothing extra shall be paid for the side shuttering at the edges of these projected balconies and projected verandah. All the edges shall however be finished as per specifications and nothing extra shall be paid for this.

4.2 FORM WORK

Basically, only steel shuttering shall be adopted in general. However, a combination of steel and shuttering ply conforming to I.S: 848-1974 and I.S: 5539 may be allowed by the Engineer-in-Charge in consideration of the special request of the contractor to maintain quality and speed of the work. In such cases the use of shuttering ply shall be permitted only for circular columns, beam sides and bottom and in other locations wherever it is felt necessary on

account of difficulty in using steel shuttering in such locations. But in other areas like slab, rectangular/square columns etc. steel shuttering shall be invariably used. However, no extra payment or deduction will be admissible or made for use of shuttering ply.

4.2.1 To maintain the quality and speed the contractors have to arrange and bring the shuttering materials at site for execution of the works of one floor at a time.

5. TESTING OF MATERIAL

- 1) The contractor shall procure all the materials in advance so that there is sufficient time for testing and approving of the material and clearance of the same before use in work.
- 2) In case of concrete and reinforced concrete work, the contractor shall be required to make arrangement for carrying out compression strength tests at his own cost. He shall render all assistance for the preparation of cubes, safe custody of the same proper curing and carriage up to the laboratory where the test is to be performed. The cube tests can be performed at any laboratory approved by the Engineer-in-Charge.
- 3) Time allowed for execution of the work provided in clause 5 of Schedule 'F' is inclusive of the time required for any kind of testing of materials and preparation of Design mix of cement concrete for all R.C.C. work, time required for initial load testing / routine load testing of piles and time required for testing of weld etc.
- 4) If need arises, the materials and the products to be used for the works may be tested at the in-house laboratory of IAHE and the products/material should be up to the mark as per standards and requirement specified in the schedule of quantities. Further, the test results should conform to the specifications of the product failing of which the contractor is liable to be imposed the penalty in addition to the rectification of the defects arising out of week material used in the work.

WARRANTY CARD WHEREVER APPLICABLE

Wherever applicable, the product which comes with manufacturer's warranty/guarantee shall be availed by the agency and such warranty / guarantee should be handed over to the Engineer - in - Charge.

CHAPTER-09

COMMERCIAL CONDITIONS

1. **Location:** The work is to be done in the campus of *Indian Academy of Highway Engineers (IAHE), A-5, Sector-62, Noida-201301.*
2. The contractors are advised to get acquainted with the proposed work and its site and also study the specifications and special conditions carefully before tendering. No claim of any sort shall be entertained on account of any site conditions and ignorance of specifications and special conditions.
3. The rates quoted by the contractor shall be taken as net and nothing extra shall be paid on any account i.e. royalty, cartage, taxes and stacking at required places etc.
4. The rates for different items of work shall apply for all heights and depths, leads and lifts unless otherwise specified in the agreement or specifications applicable to the agreement.
5. Any damage done by the contractor to any existing work during the course of execution of the work shall be made good by him at his own cost.
6. Articles manufactured by the reputed firms and approved by Engineer-in-Charge shall only be used.

Only articles classified, as "first quality" by the manufacturer shall be used unless otherwise specified. In case articles bearing ISI certification are not available in the market, quality of samples brought by the contractor shall be judged by standards laid down in the relevant CPWD specifications. For the items not covered by CPWD specifications relevant BIS standards shall apply. The sample of materials to be brought to site for use in work shall be got approved from the Engineer-in-Charge before actual execution of work.

7. Samples of materials required for testing shall be provided free of cost by the contractor. Testing charges, if any, shall be borne by the department in case the test results are satisfactory except where-ever specifically mentioned otherwise in the NIT. All other expenditure to be incurred for taking samples, conveyance, packing etc. shall be borne by the contractor. If material fails in testing, the testing charges will be borne by the contractor.
8. The quantities of each item shall not be exceeded beyond the agreement quantities without prior permission of Engineer-in-Charge.
9. Statutory deductions on account of GST, income tax and surcharge as applicable shall be made from the gross amount of the bill.
10. The contractor shall make his own arrangements for obtaining electric connection, if required and make necessary payments directly to the department concerned.
11. The contractor shall make his own arrangement for getting the permission to ply the trucks from the traffic police.
12. No payment shall be made to the contractor for any damage caused by rain, snow fall, floods or any other natural causes whatsoever during the execution of work. The damage caused to work shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.

13. Some restrictions may be imposed by the security staff etc. on the working and or movement of labour and materials, etc, the contractor shall be bound to follow all such restrictions / instructions and nothing shall be payable on this account.
14. Deleted.
15. The contractor shall be fully responsible for the safe custody of the material issued or brought by him to site for doing the work.
16. The rate for all items of work, shall unless otherwise clearly specified include cost of all labour, material and other inputs involved in the execution of the items.
17. Any reference made to any Indian Standard Specifications in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work, at site.
18. The contractor shall make his own arrangement of water for construction and drinking purpose as well as for electricity and its distribution at his own cost. All the fees and charges including consumption charges shall be borne by the contractor.
19. The malba /garbage generated at site due to construction activities shall be removed from the site immediately & shall be disposed of by the contractor to the approved dumping site identified by the Engineer-in-charge.
20. The contractor shall clean the site thoroughly of scaffolding materials, rubbish, equipment left out of his work and dress the site around the building to the complete satisfaction of the Engineer-in-charge before the work is treated as completed.
21. The labour welfare cess/ fund @ 1% of gross work done shall be deducted.
22. Contractor if required will assist the consultant in getting the completion certificate from local bodies.
23. The department shall be at full liberty to get the installation inspected by the third party and the contractor shall have to make all modifications in the designing and installations as communicated to it by the department inter-alia advised by the third party.
24. **DISCREPANCY BETWEEN THE NOMENCLATURE OF ITEMS, SPECIFICATIONS, AND /OR THE DRAWINGS**

The following specifications are applicable for the work. In case of discrepancy between the nomenclature of items, specifications, and /or the drawings or in case no specifications are specified (Refer clause 28 of the General Conditions of the Contract-2014) the following order of preference shall be observed:

- i) Nomenclature of items including the scope of work as given in Schedule of Quantities of this tender.
- ii) Technical / Particular Specifications, Special Conditions and other provisions of this tender.
- iii) Drawings.
- iv) CPWD Specifications (latest edition) with upto date correction slips issued upto the last date of the month prior to month of submission of tender.
- v) BIS Codes with latest revisions issued upto the last day of the month prior to month of submission of tender.
- vi) International standards and accepted international practices as approved by Engineer-in-Charge
- vii) Sound Engineering Practice as per directions of the Engineer-in-Charge.

If there are varying or conflicting provisions made in any document forming part of the contract, the Engineer-in-Charge shall be the deciding authority with regard to the intention/interpretation of the tender and his decision shall be final and binding on the contractor.

26. The lowest tenderer / Associate Agency shall submit before the supply of materials an undertaking from the manufacturer for chemicals regarding:

- a. Authorized applicator Certificate
- b. The manufacturer shall unconditionally support the lowest tenderer technically throughout the execution of contract as well as for Maintenance/ Comprehensive Maintenance Contract for the useful life of the system, and

27. TERMS OF PAYMENTS

The following terms of payment have been mentioned in the schedules and shall be followed.

28. GUARANTEE/WARRANTEE

Providing and laying of water proofing solution, complete in all respect to the satisfaction of Engineer-in-charge will be handed over to the department after necessary testing and commissioning. The defect in the operation and functioning of water proofing during warrantee period shall be forthwith rectified/ repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the engineer-in-charge in this regard shall be final & binding on the contractor.

29. The contractor shall submit the relevant test certificate at the time of supply of water proofing chemical/product.

30. Deleted.

31. Deleted.

32. **DURING INSPECTION AND TESTING**

32.1 Adequate care to ensure that only tested and genuine materials of proper quality are used in work shall be ensured by firm. The firm shall ensure that:

(a) Material will be ordered and delivered at site only with the prior approval of the department. The contractor shall, however, be responsible for timely delivery of material.

(b) As and when the order is placed for the items, it shall be endorsed to the engineer-in-charge along with details of Agency, model no. and other delivery details.

33. **COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS**

Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the product/chemicals in accordance with currently applicable statutory regulations and safety codes.

CHAPTER-10

Other Work requirement and compliance to Laws

1. The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, machinery, equipment, temporary structures and transport which may be required in preparation of and for the full and entire execution and completion of the works. The descriptions given in Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

2. DEVIATION FROM THE DRAWINGS, SPECIFICATIONS, STIPULATION, CONDITIONS

The contractor is not to vary or deviate from the drawings, specifications, stipulation, conditions of tender document or instructions to execute any work of any kind whatsoever unless so authorized by the Engineer-in-Charge in writing. For any extra work involved in consequence of some breach of this contractor the part of the contractor(s), no extra payment will be admissible to the contractor.

3. PROTECTION OF WORKS

All finished Works shall be protected from damage that could arise from other construction activities. Work shall be planned and executed in such a manner that work completed by others is not damaged. The compliance of these provisions is deemed to be included in the quoted amount and nothing extra shall be paid on this account. The contractor shall maintain in good condition all work till the completion of entire work allotted to him. Engineer-in-Charge shall not be held responsible for any claims for injuries to persons/workmen or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any other of his authorized representatives / labour in his employment during the execution of the work. The compensation, if any, shall be paid directly to the department/authority/persons concerned, by the contractor at his own cost.

4. RIGHT TO CARRY OUT THE WORK

The right to carry out the work either in conformity with or in a manner entirely different from the terms of this tender document that may be considered the most suitable before or subsequent to the receipt of tenders due to exigencies of work is reserved with the Engineer-in-Charge.

5. PROGRESS OF WORK

Contractor shall give the Engineer-in-Charge on the 10th day of each month, 2 copies of progress report in the prescribed format of the work done during the previous month and program/ proposal for the next month. Such progress report will include the quantum of work done, important materials consumed, and materials available at

site, materials proposed to be procured during the month & photographs of important activities as well as showing progress of the work.

6. NIGHT WORK

For completing the work in time, the contractor might be required to work in two or more shifts (including night work) and no claim whatsoever shall be entertained on this account, notwithstanding the fact that the contractor will have to pay to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and /or extra amounts for any other reason.

7. CONTRACTOR TO INDEMNIFY

The Contractor shall at all times indemnify the department against all claims, damages or compensation under the provisions of payments of Wages Act 1936, Workmen's Compensation Act 1923, Minimum Wages Act 1948, Employment Liability Act 1938, Industrial Disputes Act 1947, Maternity Benefit Act 1961, Interstate Migrant Workmen (Regulation of Employment and Conditions Sewage) Act 1979 or any modifications thereof or any other law relating thereto any rules made there under from time to time or as a consequence of any accident or injury to any workmen or other person in or about the works, whether in the employment of the Contractor or not, save and except where such accident or injury has resulted from any act of the department, their agents or servants and also against all costs, charges and expenses of any suit, action or proceedings arising out of such accident or injury and against all sum or sums which may with the consent of the Contractor be paid to compromise or compound any such claim without limiting his obligation and liabilities as above. The Contractor shall insure against all claims, damages or compensation payable under the Workmen's Compensation Act 1923, or any modifications thereof or any other law relating thereto. The Contractor shall ensure that similar insurance policies are taken out by his sub-contractor (if any) and shall be responsible for any claims or losses to department resulting from their failure to obtain adequate insurance protection in connection thereof. The contractor shall procure or cause to be produced by his Sub-Contractors (if any) as the case may be relevant policy or policies and premium receipts as and when required by the Engineer-in-charge.

8. SAFETY OF WORKER

Over and above the provisions made in CPWD Safety Code the following will also be applicable: In respect of all workmen directly or indirectly employed in the work for the performance of the contractor's part of this agreement, the contractor shall at his expense arrange for the safety provisions as per Indian Standard Safety codes shown below and shall at his own expense provide for all facilities in connection there with. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay penalty prescribed under relevant clauses of these tender documents for each default and in addition the Engineer-in-charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the cost incurred on that behalf from the contractor, and no claims on this account whatsoever shall be entertained.

1. IS: 3696 (part I) Safety code for scaffolds and ladders.
2. IS: 3696 (part II) Safety code for scaffolds and ladders Part II ladders.
3. IS: 4081 Safety code for blasting and drilling operations.
4. IS: 7293 Safety code for working with construction machinery.
5. IS: 7969 Safety code for storage and handling of building materials.
6. Any other code and/or as per directions of Engineer-in-charge.

9. COMPLIANCE OF LAWS

The contractor shall keep himself fully informed of all acts and laws of the Central and state govt. (i.e. Govt. of National Capital Territory of Delhi) all local bye laws, ordinances, rules and regulations and all orders and decree of bodies or, tribunals having any jurisdiction or authority which in any manner affect hose engaged or employed on the work or which in any way affect the conduct of the works. Contractor shall at all times, observe and comply with all such laws, ordinances, rules, regulations, orders and decrees, and shall give all notices and pay out of his own money any fees or charges to which he may be liable. He shall protect and indemnify the Department and its officers and employees against any claim or liability arising out of violations of any such law, ordinances, legislations, order or decree, whether by himself or by his employees & authorized representatives.

10. PREVENTION OF NUISANCE AND POLLUTION

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution. He shall make good at his own cost and to the satisfaction of the Engineer-in-charge, any damage to roads, paths, drainage works or public or private property whatsoever caused by the execution of the work or by traffic brought thereon by the contractor. All waste or superfluous materials shall be cleaned away by the contractor without any reservations entirely to the satisfaction of the Engineer-in-charge at no extra cost.

11. NO WAIVING OF LEGAL RIGHTS AND POWERS

The Engineer-in-Charge shall not be precluded or stopped from taking any measurements, and framing of estimates or detaining any certificates made either before or after the completion and acceptance of the work and payment, from showing the true amount and character of the works performed and materials furnished by the contractor and from showing that any such measurements, estimates

or certificates untrue or incorrectly made and that Engineer-in-charge shall not be precluded or stopped from recovering from the contractor such damages as it may be sustained by reasons of his failure to comply with the terms and conditions of the contract.

Neither the acceptance by the Engineer-in-Charge nor any payment for acceptance of the whole or any part of the work nor any extension of time nor any possession taken by the Engineer-in-Charge shall operate as a waiver of any portion of the contract or any power here in reserved or of any risk to damage. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

12. SITE MAINTENANCE

The Contractor shall maintain the Sites in good order during the whole construction period. It is strictly prohibited to bury any kind of waste materials, solid or liquid, in the ground. In the event of accidental discharge of polluting materials, the Contractor shall take immediate mitigating action and shall immediately inform the Client and the appropriate authorities.

13. PERSONAL PROTECTIVE EQUIPMENTS (PPEs)

13.1 The contractor shall provide required PPEs to workmen to protect against safety and/or health hazards.

Primarily PPEs are required for the following protection.

- i. Head Protection (Safety helmets)
- ii. Foot Protection (Safety footwear, Gumboot, etc.)
- iii. Body Protection (High visibility clothing (waistcoat/jacket), Apron, etc)
- iv. Personal fall protection (Full body harness, Rope-grap fall arrester, etc)
- v. Eye protection (Goggles, Welders glasses, etc)
- vi. Hand protection (Gloves, finger coats, etc.)
- vii. Respiratory Protection (Nose mask, SCBAs, etc.)
- viii. Hearing protection (Ear plugs, Ear muffs, etc)

The PPEs and safety appliances provided by the contractor shall be of the standard as prescribed by Bureau of Indian Standards (BIS). If materials conforming to BIS standards are not available the contractor as approved by the Engineer-in-charge shall procure PPE and safety appliances

13.2 In addition to the above any other PPE required for any specific jobs like, welding and cutting, working at height, tunnelling etc shall also be provided to all workmen and also ensure that all workmen use the PPEs properly while on the job. The contractor shall not pay any cash amount in lieu to PPE to the workers/sub-contractors and expect them to buy and use during work. The contractor shall at all-time maintain a minimum of 10% spare PPEs and safety appliances and properly record and show to the Engineer-in-charge during the inspections. It is always the duty of the contractor to provide required PPEs for all visitors. towards this required quantity of PPEs shall be kept always at the security post.

14. EMPLOYER'S RISK

a) In the event of any such loss or damage happening from any of the excepted risks defined in GCC 2014 pertaining to permanent works, as in combination with other risks, the contractor shall, if so required by the Engineer-in-charge, rectify the loss or damage. An addition to the contract price shall be determined treating the work done to rectify the loss or damage as variation/ extra/ substituted item, as given in the relevant clauses.

b) Whenever any event as mentioned above occurs, the contractor will notify the Engineer-in-charge, within 14 days and provide a forecast cost of repairs / rectifications of damages / losses. As soon as information demonstrating the effect of such event is available, the Engineer-in-charge shall assess the cost of repairs/ rectifications to be paid. In case contractor's forecast is deemed unreasonable, the Engineer-in-charge shall adjust the contract price and/ or extend the c.

15. **DEFECT LIABILITY PERIOD:** Defect liability period for water proofing system shall be 10 years and other than water proofing works, it would be one year from the date of completion of the work. The contractor has to remove any defect in the work carried out with a week period failing of which the authority may get removed the defect with its own cost chargeable from the contractor.

CHAPTER-11

TECHNICAL SPECIFICATION

1. Technical specification as mentioned in schedule of quantities shall be strictly be followed. The quality of work to be done by the contractor in all the works shall be as per manufacturer's instruction and to the satisfaction of Engineer-in-charge. All requisite test to the finished items shall be carried out as per direction of Engineer - in-charge at the cost of contractor.

Schedule of Quantities

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
Dismantling work						
1	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	Cum	17.19		-
2	15.7	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	Cum	126.88		-
3	NS	Removing/chipping and cleaning of existing plaster carefully by low impact high frequency hammer without damaging the existing concrete or by control tools including cleaning the surface by air jet etc. complete as per direction and satisfaction of Engineer-in-charge.	Sqm	4346.78		-
4	15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.	Cum	2.40		-
Sub-Total						-
Structural steel/bar repairing work						
6	NS (a)	Applying a coats of alkaline rust remover primer of Fosroc Reebaclean RR or Sika rust off 100 or equivalent (Cleaning existing reinforcement with wire/ rotary wire brush, making the surfaces free from loose material, dirt etc. complete) on the rebars, including cleaning the reinforcement wire brushing to remove loose rust spalls, clean all rust with water as per the recommendation of manufacturer complete as per direction of Engineer-in-charge. (Including centering and Shuttering)	Ltr	36.20		-
	(b)	Supplying rust remover primer of Fosroc Reebaclean RR or Sika rust off 100 or equivalent as per direction of Engineer-in-charge.	Ltr	36.20		-

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
7	NS (a)	Providing and laying anticorrosive Treatment of Reinforcement that Zinc rich Primer of Sika Friezinc R or Fosroc Nito Zinc or equivalent (The application shall be by brush). Process is to be complete as per the recommendation of manufacturer and direction of Engineer-in-charge. (Including centering and Shuttering)	Ltr	72.41		-
	(b)	Supplying Zinc Rich Primer of Sika Friezinc R or Fosroc Nito Zinc or equivalent as per direction of Engineer-in-charge.	Ltr	72.00		-
8	NS (a)	Drilling and fixing injection packers in RC members including, Drilling Holes: Drilling 14 mm dia., D/2 mm (or more as per need) deep holes in structural members at the intervals of 350 mm c/c horizontally and D mm c/c vertically in staggered manner at an angle of 45 degree or as per recommendation of manufacturer and direction of engineer in charge.(D is the section thickness) Cleaning of holes: Clean the holes by air blower prior to fixing nozzles. Fixing of Packers: Insert 12 mm dia., 50-75 mm long NRV packers in cleaned holes with structural grade epoxy adhesive like Sikadur-31 or equivalent. Cutting of Packers: Cut the packers by cut of wheel after completion of grouting without damaging structural elements. (Including centering and Shuttering)	Nos	360.00		-
	(b)	Supplying Low viscous injection grouting epoxy of Sika Sikadur 52 LP or Fosroc Conbdextra EP-10 or equivalent as per direction of Engineer-in-charge.	Ltr	108.11		-
9	NS	Epoxy Bonding Agent -Supply and apply a epoxy resin based solvent free bond coat. Product: Fosroc Nitobond EP STD or Sika Sikadur-32 LP or equivalent Consumption: 0.5-0.8 kg/m2. Product requirements: Complies with ASTM C 881 Type II Grade 2 Class B+C. (Including centering and Shuttering)	sqm	181.18		-

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
10	NS	Providing and laying microconcrete thickness as per the drawing by consultant on the designated area to the prepared slurry tight shuttering with proper shear connector and bonding agent where ever necessary, The fluid micro-concrete repair material shall be a single component, cement based, Fosroc Renderoc RG/STP Shalifix MC/ Sika SikaRep micro-concrete or equivalent to which only the site-addition of clean water (and approved graded coarse aggregates where specified) shall be permitted. The microconcrete shall contain no metallic aggregates, or chlorides and shall be shrinkage compensated in the plastic state.The micro concrete in the flowable consistency should achieve a compressive strength of 50 N/mm2 after 28 days at 30C. The unrestrained expansion shall be between 1 - 4%. The flexural strength shall not be less than 5 N/mm2 @ 28 days. The mixed density of microconcrete shall exceed 2100 kg/m3 at 27C.strictly following manufacturer instruction direction of ENgineer-in-charge. cost including, suppling, laying,labour, mixing. (Including Centering and Shuttering)	Cum	18.00		-
Sub Total						-
Item for Concrete cover repair work with pre-batched repair mortar						
11	NS	Providing and applying pre batched one componend Polymer modified cementious patch repair mortar of 10-12 mm thick in a layer as per manufacturer recommendation and as direction of EIC: If any where additinal thickness required more than 12 mm , need to applying in two coats. Product : Fosroc Randroc HS Extra / Sika Monotop 122F or equivalent Density : 2250kg/cum Compressive Strength: >=50Mpa (28 Days) as per ASTM C 109 Flexureal Strength >=3Mpa (7 days) As per ASTM C 293-79 (Including Centering and Shuttering)	Sqm	48.00		-

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
12		Curing Compound application by brush/ spreyc of High efficiency Polymer based film forming curing agent, Fosroc Concure WB White Std or Sika Antisol or equivalent concrete curing compound is polymer based continuous film forming curing compound and is supplied in various pigmented grades. Clear : Straw liquid curing to a clear film ,Blue : As clear grade but with blue fugitive dye, Specific Gravity : 0.82 - 0.85, When first applied to a fresh cementitious surface the product, forms a continuous, non-penetrating coating. This coating, dries to a form a continuous film which provides a barrier to moisture loss ensuring more efficient cement hydration, improved durability and reduced shrinkage. Finish as per the manufacturer's specification (Including Centering and Shuttering)	Sqm	229.18		-
13	5.18.2	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits 40 mm thick (Including Centering and Shuttering)	Sqm	852.00		-
14		Introducing new reinforcement bars for structural connections in RCC Beams and columns including power drilling holes of appropriate diameters in reinforced or plain cement concrete as per given size. Fe 500 D TMT (If required) (Including Centering and Shuttering)				
		8mm x 80mm (Fisher/Hilti)	Nos.	200.00		-
		10mm x 100mm (Fisher/Hilti)	Nos.	100.00		-
		16mm x 160mm (Fisher/Hilti)	Nos.	100.00		-
Sub Total						-
Item for General/Plaster Cracks Repair work						

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
15	NS	Cracks to be cut in 'V' shape groove of 5-8mm deep and 5mm wide with hand grinder and providing and repairing with polymeric cement mortar admix with Nitobond SBR /Sika Latex/ShaliSBR Latex @ 4-5% of cement and polypropylene fibre@ 100gms/ bag of cement and finish smooth. It should be applying after a neat coat of Nitobond AR as a bond coat. (Including Centering and Shuttering)	RM	436.62		-
16	NS	Makeing 'V' groove of 10mm wide and 10mm deep over crack line at junction of Brick and RCC by electrically operated angle grinder with diamond concrete saw blade and cleaning it by air blower as directed by Engineer-in-charge. (Including Centering and Shuttering)	RM	317.80		-
17	NS	Sealing of exposed 'V' groove of 10mm deep and 10mm wide with PU sealant Sika Sikaflex construction or equivalent Providing and applying polyurethane based joint sealant Sikaflex Construction + by caulking gun as per standard method statement including tooling , finishing in a convex profile etc. (Including Centering and Shuttering)	RM	317.80		-
Sub Total						-
Waterproofing System on Horizontal Slabs Projcting outward						
		Substrate Preparation				
18		Grinding of concrete roof with hand grinder and clean the surface to remove dust, loose particles, etc with compressed air or any other suitable technique depending on site conditions, grinding any sharp edges, etc. Also repair all big cracks with polymeric putty/mortar and make surface in workable conditions and water proof. (Including Centering and Shuttering)	Sqm	1100.00		-
19	NS	Providing and applying a coat of primer of STP Shaliprime WB or Shaliurethane BTD with 1:1 ration diolution with water or equivalent after surface prepration . Apply waterproofing coating after drying the suface. (Including Centering and Shuttering)	sqm	1100.00		-

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
		Providing and appyling two coats of Shaliurethane BTD of STP LTD or equivalent a single component UV resistance, high performance, polyurethane based air cures by reaction with atmospheric moisture to give a tough elastomeric waterproof membrane, It confirms to ASTM C-836 and ASTM D 6083 and has a 400% of elongation. It is supplied in a single grade to meet all site application methods and requirements. The both coats shall be applied by brushes & squeegee wiper application for thickness of 1.2mm approximatly which will embaded firemesh cloth between two coats.Application and methods shall be as per the Instruction of manufacturar's specification. It is applied up to 400 mm over the peraoet walls or as per site-in-charge guideliness. (Including Centering and Shuttering)				
Sub Total						-
Damaged Plaster Chiiping Off and Replastering						
20	NS	Providing and applying 12-15 mm thick plaster with polymaric cement mortar (1:4) admix with Fosroc Nitobnond SBR /Sika Latex/ShaliSBR Latex @ 1-2% of cement and polypropylene fibre@ 100gms/ bag of cement and finish smooth. It should be applying over a neat coat of acrylic based chemical like Nitobond AR of Fosroc/STP/Sika/BASF or equivalent as a bond coat. Providing hexagonal wire mesh before plaster to control the cracks at all brick & concrete joinery. The Scaffolding will be including the rates for work at heights.(Including Centering and Shuttering)	Sqm	4320.00	0	-
Sub Total						-
ltme for Brick work						
21	6.2.1	Providing and fixing bricks wall with common burnt clay F.P.S. in up to plinth level wherever required in all shapes and sizes as per site in-charge instructions In Cement mortar 1:4 (1 cement : 4 coarse sand) (Including Centering and Shuttering)	Cum	126.8784		-
22	4.1.3	Providing and laying in position cement concrete of specified grade including the cost of centering and shuttering, 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size) (Including Centering and	Cum	25.37568		-

Sr. No.	DSR ref.	UNIT	Unit	Total Qty	RATE	AMOUNT
		Shuttering)				
Sub Total						-
23		Providing and fixing UPVC rain water draiange pipes of 125-155 mm diameter as per IS : 4985:2000 specifications (Including Centering and Shuttering)	RM	220		0
Sub Total						-
Total						-